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IN THE U.S. PATENT AND TRADEMARK OFFICE

December 4, 2001

Applicants : Hiromichi INAGAKI et al

For : PACKAGING MATERIAL AND PACKAGED PRODUCT

PCT International Application No.: PCT/JP01/03563

PCT International Filing Date: April 25, 2001

U.S. Application No.
(if known, see 37 CFR 1.5): Unknown

Atty. Docket No.: Komatsu Case 261

Box PCT
Assistant Commissioner for Patents
Washington, DC 20231

PRELIMINARY AMENDMENT CANCELING CLAIMS

Sir:

Prior to calculation of the filing fee in the above-identified application, kindly enter the following:

IN THE CLAIMS

Please amend Claims 3, 5 and 6 as follows. A marked-up copy of the amended claims is also enclosed herewith.

3. (Amended) The packaging material according to claim 1, in which a thermally insulating flexible sheet is placed on the surface of the oriented film made of a synthetic resin and affixed thereto partially or over the entire surface.

5. (Amended) A packaging material comprising a cover using the packaging material according to claim 1 and provided with an excess portion and a container onto an opening of which the cover is heat-sealed, in which the cover has a larger area than an area of the opening of the container and the excess portion of the cover dangles from the upper end of

the container and is adhesively bonded to the container at the end portion thereof.

6. (Amended) A packaged product in which processed food, various food products, various foodstuffs, medical instruments, or containers are tightly sealed with the packaging material according to claim 1.

REMARKS

This amendment cancels claims to reduce the filing fee. Please enter this amendment before calculating the filing fee.

Respectfully submitted,

Terryence F. Chapman

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Tricia R. Cobb	Reg. No. 44 621

Encl: Marked-Up Version of Amendments

336.9804

MARKED-UP VERSION OF AMENDMENTS

3. (Amended) The packaging material according to claim 1~~ or claim 2~~, in which a thermally insulating flexible sheet is placed on the surface of the oriented film made of a synthetic resin and ~~a~~affixed thereto partially or over the entire surface.

5. (Amended) A packaging material comprising a cover using the packaging material according to~~ any one of~~ claim~~s~~ 1~~ to 4~~ and provided with an excess portion and a container onto an opening of which the cover is heat-sealed, in which the cover has a larger area than an area of the opening of the container and the excess portion of the cover dangles from the upper end of the container and is adhesively bonded to the container at the end portion thereof.

6. (Amended) A packaged product in which processed food, various food products, various foodstuffs, medical instruments, or containers are tightly sealed with the packaging material according to ~~any one of~~ claim~~s~~ 1~~ to 5~~.

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AMENDMENT BEFORE FIRST OFFICE ACTION

Sir:

Prior to issuance of the first Office Action in the above-identified application, kindly enter the following:

IN THE DRAWINGS

Enclosed herewith for the Examiner's approval are amendments to Figures 10 and 16, wherein reference numeral 13 is added to Figure 10 and reference numeral 9 is added to Figure 16. Support for these amendments may be found in specification paragraphs [0067], lines 7 and 8, and [0079], line 4, respectively.

IN THE SPECIFICATION

Please amend the specification as follows. Marked-Up copies of the amended paragraphs are enclosed herewith.

Please amend paragraph [0089] as follows:

[0089] A packaging bag of a low-melting heat seal type shown in FIG. 1 was fabricated by using a polyester film having a thickness of 20 μm as an oriented film (outer material) and a polyethylene film having a thickness of 40 μm as a cast film

(inner material). In a test, the bag was used for packaging, as a content, four tissues (made of Nepia, manufactured by Oji Paper Co., Ltd.) impregnated with tap water to a water content of 10-40 cc. The size of the bag was shown in FIG. 19. The packaged bag was placed in a microwave oven (EMO-MRI (HL) type, high-frequency output 500 W, turn table diameter 300 mm, manufactured by Sanyo Electric Co., Ltd.) and heated therein. Steam was generated in the course of heating, the internal pressure was increased, and in a short time it was observed that a small hole 11 was formed. In this test, the water content of the packaged product was changed, and the time until the small hole was formed in the cast film at the area corresponding to the ends of the cutting line in the oriented film and the maximum opening width observed when the film was opened along the cutting line were measured. The measurements were conducted twice, immediately after the packaging bag was manufactured (Table 1) and in 10 days after it was manufactured (Table 2).

Table 1

Water content (cc)	Time until the formation of small hole (s)	Opening width (mm)	State of small hole
10	35	20	⊙
20	40	19	⊙
30	44	19	⊙
40	52	18	⊙

Table 2

Water content (cc)	Time until the formation of small hole (s)	Opening width (mm)	State of small hole
10	32	18	⊙
20	33	18	⊙
30	41	22	⊙
40	54	19	⊙

Please amend paragraph [0090] as follows:

[0090] In the tables the symbol ⊙ relating to the state of the small hole represents a state in which the small hole was formed in the cast film at a boundary line between the surface coated with a heat seal agent and the non-coated surface, as was expected, and the steam present inside the packaging bag was released to the outside of the packaging bag with good stability.

Please amend paragraph [0097] as follows:

[0097] A packaging bag of a low-melting heat seal type shown in FIG. 9 was fabricated by using a foamed polyethylene sheet having a thickness of 300 μm as a thermally insulating flexible sheet (outer material), a polyester film having a thickness of 20 μm as an oriented film (intermediate material), and a polyethylene film having a thickness of 40 μm as a cast film (inner material). In a test, the bag was used for packaging four tissues (made of Nepia, manufactured by Oji Paper Co., Ltd.) impregnated with tap water to a water content of 10-40 cc. The size of the bag is shown in FIG. 19. The packaged bag was placed in a microwave oven (EMO-MRI (HL) type, high-frequency output 500 W, turn table diameter 300 mm, manufactured by Sanyo Electric Co., Ltd.) and heated therein. Steam was generated in the course of heating, the internal

pressure was increased, and in a short time an opened state of a small hole 11 was detected. In this test, the water content of the packaged product was changed, and the time until the small hole was formed in the cast-film and the maximum opening width observed when the film was opened along the cutting line of the oriented film were measured.

Please amend paragraph [0101] as follows:

[0101] A packaging bag (foamed PE + CPP film provided with a cutting line) shown in FIG. 15 was fabricated by using a foamed polyethylene sheet having a thickness of 300 μm as a thermally insulating flexible sheet (outer material) and a polypropylene film having a thickness of 40 μm as a cast film (inner material) having a cutting line cut therein. Commercial sweet potatoes were placed into the packaging bag and sealed therein to obtain a packaged product. The packaged product was placed in a microwave oven with a high-frequency output of 1500 W and heated for 2 min. Steam was generated in the course of heating and the internal pressure has increased. Eventually a rift appeared in the external foamed polyethylene sheet and an open state was confirmed. In this test, the weight of sweet potatoes before and after the heating was measured, the loss of water on evaporation caused by heating was calculated, and the central temperature of the heated product was measured.

Please amend paragraph [0102] as follows:

[0102] Comparative tests with the packaged products using other packaging materials were conducted. Thus, the comparative examination under the same conditions as described above was conducted on a packaged product obtained by placing sweet potatoes in a polypropylene tray (PP tray), packaging them with a vinyl chloride wrapping film (manufactured by Mitsubishi Jushi K.K.) and heating them in a microwave oven and another packaged potatoes obtained by placing potatoes in

a polypropylene tray and directly heating them in a microwave oven.

Please amend paragraph [0103] as follows:

[0103] The packaged products of the above-described three types were removed from the microwave oven immediately after heating and organoleptic examination of the feel to the touch and taste was conducted by testers who directly touched the products removed from the oven and then tasted the sweet potatoes removed from the bag or tray. The results are presented in Table 4.

Table 4

Content: Sweet Potatoes, Heating: 1500 W x 2 min

Packaging material	Before heating	After heating	Reduction percentage	Effective temperature	temperature of central part	Taste
Vinyl chloride wrapping film + PP tray	205	160	22%	x	90°C	too dry
PP tray	205	166	20%	x	90°C	too dry
Foamed PE + CPP film provided with a cutting line	205	172	16%	⊙	91°C	hot and tasty

Please amend paragraph [0104] as follows:

[0104] Then, commercial potatoes were placed in the packaging bags or containers of the above-described three types and packaged products were obtained. The packaged products were heated for 1 min and 30 s in a microwave oven with a high-frequency power of 1500 W and measurements of the amount of generated steam and central temperature and the organoleptic test were conducted in the above-described manner. The results are presented in Table 5.

Table 5
Content: Potatoes
Heating: 1500 W x one and a half minutes

Packaging material	Before heating	After heating	Reduction percentage	Effective temperature	tempera-ture of central part	Taste
Vinyl chloride wrapping film + PP tray	127	92	28%	x	87°C	slight-ly exces-sive loss of mois-ture
PP tray	127	97	24%	x	88°C	Exces-sive loss of mois-ture
Foamed PE + CPP film provided with a cutting line	135	111	18%	⊙	89°C	proper mois-ture and hot

Please amend paragraph [0110] as follows:

[0110] A heat-resistant container 20 made of a polypropylene resin and having a shape with a width of 115 mm, a length of 128 mm, and a height of 40 mm, as shown in FIG. 20, was filled with Japanese hotchpotch (*oden*) consisting of 107 g of solid ingredients and 113 cc of soup, and was heat-sealed with a cover film 19 having a portion (A) coated with a low melting-point sealing agent and a cutting line (a). The cover film 19 used herein was constituted by layers of an oriented polyethylene terephthalate (PET) film of 12 μm and a cast polypropylene film (CPP) of 30 μm.

REMARKS

Entry of the foregoing amendments prior to issuance of the first Office Action is respectfully solicited. These amendments are intended to place the application in better form for consideration by the Examiner.

Respectfully submitted,

Terryence F. Chapman

TFC/smd

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Encl: Marked-Up Version of Amendments
Proposed Corrections to Figures 10 and 16

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Please amend paragraph [0101] as follows:

[0101] A packaging bag (foamed PE + CPP film provided with a cutting line) shown in FIG. 15 was fabricated by using a foamed polyethylene sheet having a thickness of 300 μm as a thermally insulating flexible sheet (outer material) and a polypropylene film having a thickness of 40 μm as a cast film (inner material) having a cutting line cut therein. Commercial sweet potatoes were placed

into the packaging bag and sealed therein to obtain a packaged product. The packaged product was placed in a microwave oven with a high-frequency output of 1500 W and heated for 2 min. Steam was generated in the course of heating and the internal pressure has increased. Eventually a rift appeared in the external foamed polyethylene sheet and an open state was confirmed. In this test, the weight of sweet potatoes before and after the heating was measured, the loss of water on evaporation caused by heating was calculated, and the central temperature of the heated product was measured.

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Table 5

Content: Potatoes

Heating: 1500 W x one and a half minutes

Packaging material	Before heating	After heating	Reduction percentage	Effective temperature	tempera-ture of central part	Taste
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cc of soup, and was heat-sealed with a cover film 19 having a portion (A) coated with a low melting-point sealing agent and a cutting line (a). The cover film 19 used herein was constituted by layers of an oriented polyethylene terephthalate (PET) film of 12 μm and a cast polypropylene film (CPP) of 30 μm.